

## NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



## BUREAU OF BRIDGE DESIGN



## BRIDGE DETAILS - REVISION HISTORY

Date of Revision	Name of Detail	Revision Description	Background
7/22/2015	Asphaltic Plug Exp. Joint - Steel Girder,  Asphaltic Plug Expansion Joint - Joint Rehab	Revised Bearing Strip Detail: Removed strip dimension 1'-6" and 1'-3" and inserted "D" for deck strip and "B" for backwall strip.  Revised Asphaltic Plug Expansion Joint: Added dimensions "D" for deck strip and "B" for backwall strip.	Deck bearing strip dimension was incorrectly noted as 1'-6". The bearing strip dimension would need to change if the backwall dimension is not 1'-3", so "D" label was inserted. The dimension now needs to be determined from the Asphaltic Plug Expansion Joint Detail.
4/15/2015	Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)  Compression Seal Expansion Joint (in front of backwall, sidewalk)	Revised Plan View, Section C-C & Section B-B: Extended vertical steel curb plate (backwall side) to granite curb and labled 9" long for sidewalk plates. Added 1/2"x 3/4" bar to sidewalk plate (backwall side).  Plan View in front of backwall, brush curb, sidewalk: Removed "(TYP)" from sidewalk plate call outs.	The vertical plate was extended to the granite curb so a plywood form isn't needed along the curb line when the concrete is poured. A 1/2" bar x 3/4" bar is needed so the concrete doesn't spall when the top sidewalk plate is removed for maintenace. A 1/2" x 2 1/4" bar was already on the otherside of the sidewalk plate.
2/27/2015	Asphaltic Plug Exp. Joint - Steel Girder,  Asphaltic Plug Exp. Joint - Concrete Girder,  Asphaltic Plug Expansion Joint - Joint Rehab	Revised Ashpaltic Plug for Crack Control Item number <b>to:</b> <i>Item 559.4</i> <b>From:</b> <del>Item 559.4001</del>	Item number didn't get changed on one of the descriptions.
2/24/2015	Asphaltic Plug for Crack Control - Steel Girder,  Asphaltic Plug for Crack Control - Concrete Girder,  Asphaltic Plug for Crack Control - No Approach Slab	Revised Ashpaltic Plug for Crack Control Item number <b>to:</b> <i>Item 559.41</i> <b>From:</b> <del>Item 559.4101</del>	Item number didn't get changed on one of the descriptions.

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1/15/2015	Asphaltic Plug Exp. Joint - Steel Girder,  Asphaltic Plug Expansion Joint - Joint Rehab	Revised Bearing Strip Detail to match expansion joint detail. The back of deck was edited to be in line with the backwall.	Bearing Strip Detail wasn't drawn correctly.
12/18/2014	Asphaltic Plug for Crack Control - No Approach Slab	Revised top layer of pavement.	Revised detail to more clearly show top layer of pavement.
12/12/2014	Strip Seal Expansion Joint (behind backwall, brush curb)  Strip Seal Expansion Joint (in front of backwall, brush curb)	Revised note #5 <b>to:</b> <i>The compression seal shall be furnished in one continous length. No splices will be allowed. Seall shall be installed using an approved tool, recommended by the manufacturer of the seal, that will not damage the seal.</i>  <b>From:</b> <del>The compression seal shall be furnished in one continous length. No splices will be allowed.</del>  Note #6: Added words "and extrusions".  Added notes #13 & #14.	Clarified notes.

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12/12/2014	<p>Compression Seal Expansion Joint (behind backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)</p>	<p>Revised stop bar location to bottom of seal.</p> <p>Revised note #4 <b>to:</b> <i>The compression seal shall be furnished in one continuous length. No splices will be allowed. Seal shall be installed using an approved tool, recommended by the manufacturer of the seal, that will not damage the seal.</i></p> <p><b>From:</b>  <del>The compression seal shall be furnished in one continuous length. No splices will be allowed.</del></p> <p>Note #5: Replaced word "vertical" with "normal to grade".</p> <p>Note #11: Replace " 4 " " with " 5 " ".</p> <p>Added notes #12 and #13.</p>	<p>There was a discrepancy between Watson Bowman and D.S. Brown regarding the location of the stop bars. After some discussion with the manufacturers and testing of the seals, it was concluded that both manufacturers' seals will move up (not down) when compressed, and therefore can be placed on the stop bars.</p> <p>Clarified notes.</p>
11/4/2014	<p>Asphaltic Plug Exp. Joint - Steel Girder,</p> <p>Asphaltic Plug Exp. Joint - Concrete Girder,</p> <p>Asphaltic Plug Expansion Joint - Joint Rehab</p>	<p>Revised Asphaltic Plug for Crack Control Item number <b>to:</b> <i>Item 559.4</i></p> <p><b>From:</b>  <del>Item 559.4001</del></p>	<p>Item number changed back to original. The extended digits are not needed for plug joints since they are all the same. One item number can be used for all the plug joints in the contract and the lengths can be added together for a total quantity. Item description stays the same.</p>
11/4/2014	<p>Asphaltic Plug for Crack Control - Steel Girder,</p> <p>Asphaltic Plug for Crack Control - Concrete Girder,</p> <p>Asphaltic Plug for Crack Control - No Approach Slab</p>	<p>Revised Asphaltic Plug for Crack Control Item number <b>to:</b> <i>Item 559.41</i></p> <p><b>From:</b>  <del>Item 559.4101</del></p>	<p>Item number changed back to original. The extended digits are not needed for plug joints since they are all the same. One item number can be used for all the plug joints in the contract and the lengths can be added together for a total quantity. Item description stays the same.</p>

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9/18/2014	<p>Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)</p> <p>Compression Seal Expansion Joint (in front of backwall, sidewalk)</p>	<p>Revised Section C-C note <b>to:</b>  <i>Tack weld nut to plate and wrap end of bolt with teflon tape (weld 3/16" fillet for one face minimum) (TYP)</i></p> <p><b>From:</b>  <del>3/4" stainless steel countersunk head bolt with socket head @ 1'-0" (tack weld nut to plate)</del></p> <p><b>Add</b> note to Section B-B:  <i>3/4" stainless steel countersunk head bolt with socket heat @ 1'-0"</i></p>	The bolts in the sidewalk plate need teflon tape for removal and maintenance of joint.
8/11/2014	Expansion Joints - Backing Plate Detail for Finger Jt. or Plow Plate	Revised backing plate from bent plate to a straight plate.	The gap between the joint angle and the bent backing plate caused problems when galvanizing the joint.
4/22/2014	<p>Asphaltic Plug Exp. Joint - Steel Girder,</p> <p>Asphaltic Plug Expansion Joint - Joint Rehab</p>	<p>Revised Section A-A note <b>to:</b>  <i>3-1" Ø PVC drains at low end only (typical both curb lines). Set pipes to discharge away from girders and abutment seat. Provide breaks through membrane and seal. Attach drain pipes to bottom flange with clips and extend drains 6" minimum below bottom of structural steel. All costs subsidiary to item 520.7002X.</i></p> <p><b>From:</b>  At low end only provide, <del>3-1" Ø PVC drains (typical both curb lines). Provide breaks through membrane and seal with asphalt. Attach drain pipes to the bottom flange of girders with clips and extend drains to 6" minimum below the bottom of structural steel. Set drains to discharge away from girders and the abutment seat. All costs subsidiary to item 520.7XXXX.</del></p>	Clarified wording. The membrane is sealed around the pipes with a blow torch, not asphalt.

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4/22/2014	<p>Compression Seal Expansion Joint (behind backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)</p> <p>Strip Seal Expansion Joint (behind backwall, brush curb)</p> <p>Strip Seal Expansion Joint (in front of backwall, brush curb)</p>	<p>Revised Section A-A note <b>to:</b></p> <p><i>3-1" Ø PVC drains at low end only. Set pipes to discharge away from girders and abutment (pier) seat. Provide breaks through membrane and seal. Attach drain pipes to bottom flange with clip and extend drains 6" minimum below bottom of structural steel. All costs subsidiary to item 520.7002X.</i></p> <p><b>From:</b></p> <p><del>3-1" Ø PVC drains at low end only. Set pipes to discharge away from girders and abutment (pier) seat. Provide breaks through membrane and seal around with asphalt. All costs subsidiary to item 520.70XX. Attach drain pipes to bottom flange with clip and extend drains 1" minimum below bottom of structural steel.</del></p>	<p>Clarified wording. Extended drains to 6" below girders and the membrane is sealed around the pipes with a blow torch, not asphalt.</p>

## NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



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4/10/2014	<p>Compression Seal Expansion Joint (behind backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb)</p> <p>Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)</p> <p>Strip Seal Expansion Joint (behind backwall, brush curb)</p> <p>Strip Seal Expansion Joint (in front of backwall, brush curb)</p>	<p>Revised Prefabricated Compression Seal Expansion Joint Item number <b>to:</b> <i>Item 560.1001</i></p> <p><b>From:</b> <del>Item 560.101</del></p> <p>Revised Prefabricated Strip Seal Expansion Joint Item number <b>to:</b> <i>Item 561.1001</i></p> <p><b>From:</b> <del>Item 561.101</del></p> <p>Revised "Bearing Strip Detail" note <b>to:</b> <i>Deck haunch strip. Bond rubber backed side to top of deck strip for full length of deck strip section.</i></p> <p><b>From:</b> <del>Deck haunch strip. Bond rubber backed side, for full length of deck strip section, to top of deck strip.</del></p> <p>Revised note <b>to:</b> <i>Embed deck strip: 1'-6" wide section (rubber side up) into deck haunch for the entire width of the deck.</i></p> <p><b>From:</b> <del>Deck Strip: 1'-6" wide section embedded into deck haunch for the entire width of deck with rubber backed side face up.</del></p>	<p>Item number changed to include additional digits. This allows numbering for projects with more than 9 joints. Item description stays the same.</p> <p>Clarified wording in notes.</p>
4/10/2014	<p>Asphaltic Plug for Crack Control - Steel Girder,</p> <p>Asphaltic Plug for Crack Control - Concrete Girder,</p> <p>Asphaltic Plug for Crack Control - No Approach Slab</p>	<p>Revised Asphaltic Plug for Crack Control Item number <b>to:</b> <i>Item 559.4101</i></p> <p><b>From:</b> <del>Item 559.41</del></p>	<p>Item number changed to include additional digits. This allows numbering for projects with more than 9 joints. Item description stays the same.</p>

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4/10/2014	Asphaltic Plug Exp. Joint - Steel Girder,  Asphaltic Plug Exp. Joint - Concrete Girder,  Asphaltic Plug Expansion Joint - Joint Rehab	Revised Asphaltic Plug Expansion Joint Item number <b>to:</b> <i>Item 559.4001</i> <b>From:</b> <del>Item 559.4</del>  Revised "Bearing Strip Detail" note <b>to:</b> <i>Deck haunch strip. Bond rubber backed side to top of deck strip for full length of deck strip section.</i> <b>From:</b> <del>Deck haunch strip. Bond rubber backed side, for full length of deck strip section, to top of deck strip.</del>  Revised note <b>to:</b> <i>Embed deck strip: 1'-6" wide section (rubber side up) into deck haunch for the entire width of the deck.</i> <b>From:</b> <del>Deck Strip: 1'-6" wide section embedded into deck haunch for the entire width of deck with rubber backed side face up.</del>	Item number changed to include additional digits. This allows numbering for projects with more than 9 joints. Item description stays the same.  Clarified wording in notes.
3/4/2014	Asphaltic Plug Exp. Joint - Steel Girder,  Asphaltic Plug Exp. Joint - Concrete Girder,  Asphaltic Plug Expansion Joint - Joint Rehab	Revised "Sawed bituminous pavement" note <b>to:</b> <i>Sawed bituminous pavement (Notch curbs at end of deck before paving. Remove pavement and membrane to saw cut line.) (All costs subsidiary to Item 559.41)</i> <b>From:</b> <del>Sawed bituminous pavement (Remove pavement and membrane back to sawcut) (All costs subsidiary to Item 559.41)</del>	Clarified wording.

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3/4/2014	Asphaltic Plug for Crack Control - Steel Girder,  Asphaltic Plug for Crack Control - Concrete Girder,  Asphaltic Plug for Crack Control - No Approach Slab	Revised "Sawed bituminous pavement" note to: <i>Sawed bituminous pavement (Notch curbs at end of deck before paving. Remove pavement, top layer only, to saw cut line.) (All costs subsidiary to Item 559.41)</i>  <b>From:</b> <del><i>Sawed bituminous pavement (Notch curbs at backwall line before paving. Remove pavement, top coat only, to saw cut line.) (All costs subsidiary to Item 559.41)</i></del>	Clarified wording.
3/1/2014	Asphaltic Plug for Crack Control - Steel Girder	Removed deck pvc drains and corresponding notes.	The deck pvc drains were originally part of the detail to help prevent water reaching the concrete deck because the previous detail noted to have all the pavement and membrane removed. Since the new detail does not remove the deck membrane, the additional protection of the pvc drains are no longer needed.
3/1/2014	Compression Seal Expansion Joint (behind backwall, brush curb)  Compression Seal Expansion Joint (in front of backwall, brush curb)  Compression Seal Expansion Joint (in front of backwall, brush curb, sidewalk)  Strip Seal Expansion Joint (behind backwall, brush curb)  Strip Seal Expansion Joint (in front of backwall, brush curb)	Removed the <u>top</u> 1/2" x 5" steel curb plates. Vertical steel curb plates will remain and shall have length of 6". Sidewalk plates protecting the joint opening and top plates protecting the hooper for finger joints will remain.	The top plates were originally installed to protect the granite curb on the bridge. The bridges no longer use granite curb. When the fabricated joint is installed, the top plates typically will not match curb concrete. From discussion at the Bridge Issues of Common Concerns Meeting 1/28/14.



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2/5/2014	Asphaltic Plug for Crack Control - Steel Girder,  Asphaltic Plug for Crack Control - Concrete Girder,  Asphaltic Plug for Crack Control - No Approach Slab	Revised "Sawed bituminous pavement" note to: <i>Sawed bituminous pavement (Notch curbs at backwall line before paving. Remove pavement, top coat only, to saw cut line.) (All costs subsidiary to Item 559.41)</i>  <b>From:</b> <del>Sawed bituminous pavement (Remove pavement and membrane back to sawcut) (All costs subsidiary to Item 559.41)</del>	Removing the membrane takes away the protection to the deck. Bureau of Bridge Maintenance has seen the sawcut go into the concrete bridge deck and felt removing the top coat depth is adequate for crack control. From discussion at the Bridge Issues of Common Concerns Meeting 1/28/14.